

ABSTRACT

A cardiac catheter employed for minimally invasive cardiac diagnostic electrophysiology and/or cardiac ablation procedures. The catheter of this invention comprises of an elongated cylindrical and electrically non conductive main exterior tube with plurality of surface electrodes disposed on its distal portion, and a handle on its proximal end. The distal portion of this catheter can be curved and the assumed curvature can be retained by a single action on manual actuator of the catheter handle. In one embodiment of this invention an electromechanical drive system is incorporated into the catheter handle for formation of curvatures at the distal portion of the catheter. In a further embodiment an electrical heating element is incorporated within the distal electrode of the catheter for ablation procedures. In another embodiment of this invention a readily removable and disposable blood contacting segment is provided. The non-blood contacting actuator is thus reusable and reduces the cost of the cardiac electrophysiology and/or ablation procedure. The catheter of this invention comprises two tension/compression members for curvature formation at the distal end of the catheter. These tension/compression or pull/push members are wires with circular cross-sections that are integrally formed into ribbon-like configurations at their distal portions for enhanced deflectability. The actuator handle includes a pivoted member movable in one direction by the thumb of the user's hand grasping the handle and in the opposite direction by the other fingers of the same hand.